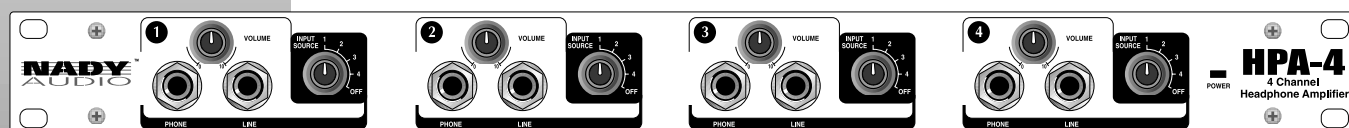


**NADY<sup>®</sup>**  
**AUDIO**

CLEAR  
RACK



# HPA-4

## 4 CHANNEL HEADPHONE/AMPLIFIER/LINE DISTRIBUTOR

# HPA-4

## 4 CHANNEL HEADPHONE/AMPLIFIER/LINE DISTRIBUTOR

# NADY<sup>®</sup>

## AUDIO



Congratulations on your choice of headphone/amplifier/line distributor — you have purchased one of the finest stereo headphone/amplifier/line distributors on the market today. This unit was developed using the expertise of professional sound engineers and working musicians. You will find that your new NADY AUDIO HPA-4 has superior performance and greater flexibility than any other headphone/amplifier/line distributors in its price range. Please read this manual carefully to get the most out of your new unit.

Thanks for selecting NADY AUDIO as your choice in headphone/amplifier/line distributor.

## FEATURES

With extensive switching functions, extreme efficiency, and unmatched sound quality, the ultra-versatile HPA-4 is a universal 4-channel multi-purpose headphone amplifier/line distribution system—perfect for the most demanding professional stage and studio applications.

- Four totally independent stereo high-power headphone amplifier/line distribution channels in a convenient single rack package—an ingenious, easy-to-operate unit allowing a maximum variety of both useful monitoring and stereo line level signal distribution options.
- Input Source Select switches and Phone and Line 1/4" TRS stereo outputs on each channel, and 4 independent stereo input sections (each with servo-balanced L & R 1/4" TRS jacks) enable independent selection of any of the 4 stereo signals for each headphone amp/line distribution channel. This allows selecting from up to 4 completely independent monitor signals for each set of headphones connected to the HPA-4 for optimum monitoring flexibility or 4 separate choices for each channel's Line Output for enabling many useful, simple audio switching/routing solutions.
- Separate Volume control for each channel adjusts the level to both Phone and parallel Line outputs
- Easily expandable for optimum versatility in any application—up to four HPA-4's can be daisy chained for additional fully selectable headphone/line distribution requirements
- No-compromise circuit design, stringently selected tight-tolerance components and low-noise, extremely linear or amps for reference-quality, transparent audio with maximum headroom even at extremely high headphone volume levels
- High-quality, rugged construction for maximum reliability
- Shielded internal dual regulated power supply with ~115V(60Hz)/~230V(50Hz) select switch and fused IEC power cord connector

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Date of Purchase \_\_\_\_\_

Dealer's Name \_\_\_\_\_

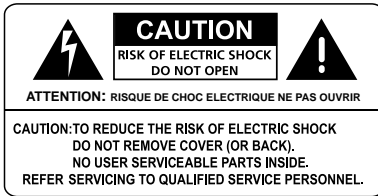
City \_\_\_\_\_

State \_\_\_\_\_ Zip \_\_\_\_\_

Model # \_\_\_\_\_

Serial # \_\_\_\_\_

# WARNING



An equilateral triangle enclosing a lightening flash/arrowhead symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure which may be of sufficient magnitude to constitute a risk of electric shock.



An equilateral triangle enclosing an exclamation point is intended to alert the user to the presence of important operating and service instructions in the literature enclosed with this unit.

## IMPORTANT SAFETY INSTRUCTIONS

When using this electronic device, basic precautions should always be taken, including the following:

1. Read all instructions before using the product.
2. Do not use this product near water (e.g., near a bathtub, washbowl, kitchen sink, in a wet basement, or near a swimming pool, etc.).
3. This product should be used only with a cart or stand that will keep it level and stable and prevent wobbling.
4. This product, in combination with headphones or speakers, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should consult an audiologist.
5. The product should be positioned so that proper ventilation is maintained.
6. The product should be located away from heat sources such as radiators, heat vents, or other devices (including amplifiers) that produce heat.
7. The product should be connected to a power supply only of the type described in the operating instructions or as marked on the product. Replace the fuse only with one of the specified type, size, and correct rating.
8. The power supply cord should: (1) be undamaged, (2) never share an outlet or extension cord with other devices so that the outlet's or extension cord's power rating is exceeded, and (3) never be left plugged into the outlet when not being used for a long period of time.
9. Care should be taken so that objects do not fall into, and liquids are not spilled through, the enclosure's openings.
10. The product should be serviced by qualified service personnel if:
  - A. The power supply cord or the plug has been damaged.
  - B. Objects have fallen into, or liquid has been spilled onto the product.
  - C. The product has been exposed to rain.
  - D. The product does not appear to operate normally or exhibits a marked change in performance.
  - E. The product has been dropped, or the enclosure damaged.
11. Do not attempt to service the product beyond what is described in the user maintenance instructions. All other servicing should be referred to qualified service personnel.

# INSTALLATION

To ensure years of enjoyment from your NADY AUDIO HPA-4, please read and understand this manual thoroughly before using the unit.

## **INSPECTION**

Your HPA-4 was carefully packed at the factory in packaging designed to protect the units in shipment. Before installing and using your unit, carefully examine the packaging and all contents for any signs of physical damage that may have occurred in transit.

*(Note: Nady Systems is not responsible for shipping damage. If the unit is damaged, do not return to us, but notify your dealer and the shipping company immediately to make a claim. Such claims must be made by the consignee in a timely manner.)*

## **CONTENTS:**

- Instruction manual
- HPA-4 (verify that the unit's serial number is same as shown on shipping carton)
- AC Power cord
- Warranty Card

## **RACK MOUNTING**

The HPA-4 fits into one standard 19" rack unit of space (1 3/4"). Parts of the unit can become very warm during use. This is normal during operation. Care should be taken to ensure that there is enough space around the unit for cooling (at least 12" or 30cm). Do not place the HPA-4 on high temperature devices such as power amplifiers, etc., or the unit may overheat in operation. Also, do not place the unit on speakers as this may cause them to move and/or fall due to speaker vibrations.

Although the unit's chassis is shielded against radio frequency (RF) and electromagnetic interference (EMI), extremely high fields of RF and EMI should be avoided.

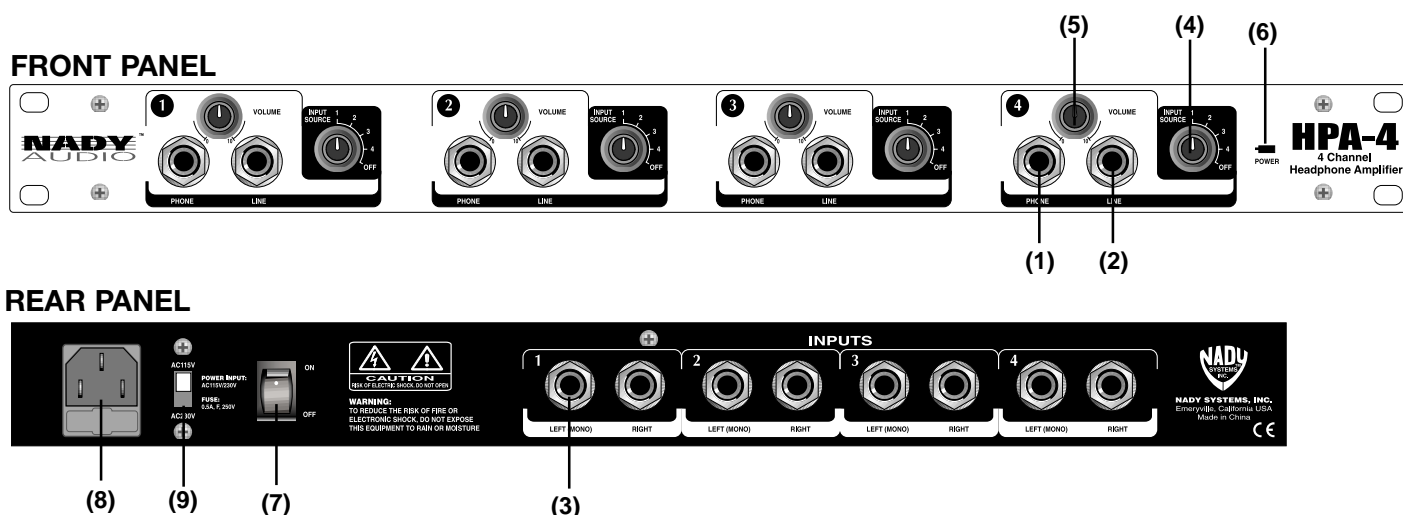
## **POWER CONNECTION**

The HPA-4 has an internal power supply and is designed to operate from an external AC source. Power requirements for electrical equipment differ from area to area. Be sure to confirm that the voltage selected by the voltage selector switch on the back panel is proper for your area (120VAC/60 Hz or 230VAC/50Hz) per the information below:

Europe (except UK): 230V, 50Hz  
UK and Australia: 240V, 50Hz  
USA and Canada: 120V, 60 Hz  
For other areas, please check with local authorities.

When ready to operate, plug the AC cord into the power source. Make sure that the unit is turned off before connecting to the AC power source to avoid possible loud transients which can damage your speakers or your ears, especially when monitoring with headphones.

## FRONT & REAR CONNECTIONS



### FRONT PANEL

#### (1) STEREO HEADPHONE OUTPUTS

Four stereo 1/4" output jacks for connecting four stereo headphones

#### (2) DIRECT LINE DISTRIBUTION OUTPUTS

Four stereo 1/4" line level output jacks for use for line distribution

### REAR PANEL

#### (3) AUDIO INPUTS

Four stereo-pair balanced, line level 1/4" TRS jacks for 4 stereo (L & R) input signals. If only the LEFT (MONO) channel input is used, the mono signal will be provided automatically at both the Left and Right sides of the **PHONE (1)** and **LINE (2)** outputs.

#### (8) POWER CONNECTOR WITH FUSE HOLDER

Standard IEC power cord receptacle used to connect the AC power to your unit. It features a built-in fuse holder for a 5X20mm, 0.5A/250V slow-blow fuse. If the fuse continuously blows, shut off the unit and have it serviced by qualified service personnel.

## CONTROLS & INDICATORS

### FRONT PANEL

The HPA-4 has four independent headphone amplifiers or line distribution channels. The unit provides 2 rotary controls and 2 stereo jacks per channel.

#### (4) INPUT SIGNAL SOURCE SELECT SWITCHES

Each channel features a rotary selector switch which allows you to select any of the 4 stereo input source signals connected to the **INPUTS (3)** of the HPA-4 to be routed to the selected channels of the headphone amplifier and line distribution output. Simply choose the source signal desired for that channel.

#### (5) VOLUME CONTROLS

Each channel features a rotary volume pot for variable adjustment of the desired output level.

#### (6) POWER LED INDICATOR

This LED indicator illuminates when the unit is powered on by the rear panel **POWER SWITCH (7)**.

### REAR PANEL

#### (7) POWER SWITCH

To turn the unit ON or OFF, press the upper or lower portion of this button as indicated. The front panel **POWER LED INDICATOR (6)** will illuminate when the power is "ON". Before turning on this unit, verify connection to the proper voltage AC source, check all connections and turn down the level controls of equipment connected to the outputs.

#### (9) AC VOLTAGE SELECTOR SWITCH

Before plugging in the power cord, check to see that the unit is set for the proper voltage for your area: ~115v (60Hz) or ~230V (50Hz).

*(Note: use at the improper voltage can damage your unit and void the warranty.)*

# APPLICATIONS

## USING THE HPA-4 AS A HEADPHONE AMPLIFIER

Connect a stereo (L & R) program source (2 x 1/4" plugs) to the rear of the HPA-4 using one of the available 4 x stereo **INPUT (3)** pairs on the rear panel.

Connect a set of headphones using a stereo 1/4" cable to any of the **HEADPHONE OUTPUTS (1)** on the front panel of the HPA-4.

Select the source signal from the rotary **SELECTOR (4)** switch for the channel in use. Set to an appropriate level for monitoring.

*(Note: If only the LEFT (MONO) channel input is used, the mono signal will be provided automatically at both the Left and Right sides of the **PHONE (1)** and **LINE (2)** outputs.)*

Since the HPA-4 offers four independent channels, you can have four individual mixes for four musicians with a single unit. In studio recording applications, you can configure sub-groups, aux sends or single outputs of your audio mixer to feed signals independently to the HPA-4. This enables each musician to receive a specific configuration of instruments of their choice in their headphones.

*[Note - If four headphone outputs are not enough, you can interface and link any number of HPA-4's for additional outputs (see below).]*

## USING THE HPA-4 AS A LINE DISTRIBUTION UNIT

To use the HPA-4 as a line distribution unit all you have to do is use the line output instead of the headphone output on the front of the unit for the line distribution signal feed. All other operation is identical as using the unit as a headphone amplifier.

Daisy chaining multiple HPA-4's together for additional headphone/line distribution requirements.

It is very easy to chain multiple HPA-4's together. Use appropriate single stereo 1/4" TRS to two 1/4" TS (2 x mono) adapter cables and make connections from the **LINE DISTRIBUTION OUTPUT (2)** channels on the front of your first HPA-4 unit to the stereo (L&R) **AUDIO INPUTS (3)** on the rear of your second HPA-4.

This effectively allows an additional (fully selectable) 4 headphone outputs and an additional 4 line outputs! You can continue to chain up to four HPA-4 units together using this same procedure.

# SPECIFICATIONS

## **AUDIO INPUTS**

Connectors ..... 1/4" jack  
Type ..... Unbalanced  
Impedance ..... 47k Ohms  
Peak input level ..... +25dB  
Gain control range ..... +35dB

## **HEADPHONE POWER AMPLIFIER OUTPUTS**

Max. output level ..... 300mW@32 Ohms (max 1W @ 32 Ohms)  
Output impedance ..... 22 Ohms  
Max. gain ..... +20 dB

## **LINE DISTRIBUTION OUTPUTS**

Connectors ..... 1/4" jack  
Type ..... Unbalanced/Parallel

## **DISTORTION, FREQUENCY RESPONSE, S/N RATIO & CROSSTALK**

Distortion ..... 0.02%  
Frequency response ..... 20Hz~20kHz, 0dB~-2B  
S/N Ratio ..... Better than 80dB  
Crosstalk rejection ..... >68dB@1kHz; 20dBinput

## **FUNCTION CONTROLS**

Volume ..... Per channel, variable  
Signal selectors ..... Per channel, Variable

## **POWER SUPPLY**

AC requirements ..... Selectable, ~100-120 VAC,  
~ 200-240V AC, 50-60 Hz  
Power consumption ..... 11.5VA  
Fuse ..... 100-120 VAC: 630 mA (slow-blow)  
200-240 VAC: 315 mA (slow-blow)  
100-240 VAC: 500 mA (slow-blow)  
5X20mm glass type  
Power cord connector ..... Standard IEC receptacle  
with built-in fuse holder

## **PHYSICAL**

Dimensions ..... 1.75"X 19"X 8.5"(44.5X482.6X217mm)  
Weight ..... 6.93lbs (3.15Kg)

*The specifications above are correct at the time of printing of this manual. For improvement purposes, all specifications for this unit, including design and appearance, are subject to change without prior notice.*

## NOTES

## **SERVICE FOR YOUR NADY AUDIO PRODUCT**

**(U.S.)** Should your NADY AUDIO product require service, please contact the Nady Service Department via telephone at (510) 652-2411, or e-mail at [service@nady.com](mailto:service@nady.com).

**(International)** For service, please contact the NADY AUDIO distributor in your country through the dealer from whom you purchased this product.

DO NOT ATTEMPT TO SERVICE THIS UNIT  
YOURSELF AS IT CAN BE DANGEROUS AND  
WILL ALSO VOID THE WARRANTY.



NADY SYSTEMS, INC. • 6701 SHELLMOUND STREET, EMERYVILLE, CA 94608  
Tel: 510.652.2411 • Fax: 510.652.5075 • [www.nady.com](http://www.nady.com)